

NOTE

First Record of the Red Pine Scale, *Matsucoccus resinosa*
(Homoptera: Margarodidae) from Pennsylvania

An extensive infestation of an undescribed scale insect was found on red pine, *Pinus resinosa* Ait., in Connecticut in 1946. Bean and Godwin described this scale as *Matsucoccus resinosa* in 1955 (For. Sci. 1: 164-176). Through extensive surveys, by 1976 this scale also was found in New Jersey and New York (Anderson, J. F. et al. 1976. Conn. Agric. Exp. Stn. Bull. 765: 1-6). The red pine scale is thought to be an introduced species, possibly of Eurasian origin, imported on pines planted on the grounds of the 1937 New York World Fair, although this has not been proven (Doane, C. C. 1959. Conn. Agric. Exp. Stn. Circ. 207: 1-7).

In November, 1980, I received a sample of Japanese red pine, *Pinus densiflora* Sieb. and Zucc., a known host of *M. resinosa*, from the Morris Arboretum in Philadelphia, submitted by Ann F. Rhoads, plant pathologist at the Arboretum. Dr. Rhoads indicated that the tree was in a state of decline and that scale feeding was the suspected cause. Examination of the sample revealed first instar Coccoidea, the overwintering form of the red pine scale. Since these could not be positively identified, I made additional collections in spring, 1981. Stages found during the spring compared exactly with the descriptions of the various stages of *M. resinosa* presented by Bean and Godwin (1955). On May 21, 1981, I collected adults and positively identified them as *Matsucoccus resinosa*, the red pine scale. At this time both sexes were active on 5-year and older growth, and some females had begun to oviposit. Ovisacs and male cocoons were abundant on the undersides of infested limbs.

This collection, representing the first record of *M. resinosa* in Pennsylvania, is the only known infestation in the state. Arboretum records show that the infested tree was part of a plant breeding experiment conducted in 1958; further details of the history of that particular plant are not known. How this isolated infestation became established remains a mystery.

Slide mounted voucher specimens have been deposited in the U.S. National Museum, Beltsville, Maryland. Morris Arboretum personnel are attempting to eradicate the scale population.

I am grateful to Ann. F. Rhoads, plant pathologist, Morris Arboretum, Philadelphia, for bringing the infestation to my attention and for her interest and cooperation.

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